

## FEATURES

- Outline dimension(47.6mm×40.0mm×45.1mm)
- 1 Form X arrangement
- Contact gap,3.6mm Min.
- Designed to meet UL/CUL,TUV requirements
- PCB terminal for the mounting
- RoHS compliance
- REACH SvHC compliance



File NO. E341422



File NO. R50316974

## APPLICATION

DC Power Control

Inverter precharging circuit control

Industrial Control

## COIL PARAMETER

|              |                   |
|--------------|-------------------|
| Coil voltage | 12VDC,24VDC,48VDC |
| Coil power   | 3.2W              |

## CONTACT DATA

| Type                              | CHDR-150H                      | CHDR-100H                      | CHDR-100                       |
|-----------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Contact arrangement               | 1 Form X                       |                                |                                |
| Contact material                  | Ag Alloy                       |                                |                                |
| Initial contact resistance        | 100mΩ max.@6VDC,1A             |                                |                                |
| Max. switching voltage            | 60VDC                          | 60VDC                          | 48VDC                          |
| Max. switching current            | 150A                           | 100A                           | 100A                           |
| Max. switching power              | 9000W                          | 6000W                          | 4800W                          |
| Contact rating                    | 150A@60VDC<br>(Resistive load) | 100A@60VDC<br>(Resistive load) | 100A@48VDC<br>(Resistive load) |
| Mechanical endurance              | 1,000,000 ops Min.(no load)    |                                |                                |
| Electrical endurance              | 1,000 cycles                   | 1,000 cycles                   | 3,000 cycles                   |
| Minimum load<br>(reference value) | 100mA @5VDC                    |                                |                                |

## COIL DATA @23°C

| CHDR                       |                      |                         |                            |                            |
|----------------------------|----------------------|-------------------------|----------------------------|----------------------------|
| Nominal coil voltage (VDC) | Nominal Current (mA) | Coil Resistance (Ω±10%) | Operate Voltage (VDC Max.) | Release Voltage (VDC Min.) |
| 12                         | 267                  | 45                      | 9                          | 0.6                        |
| 24                         | 133                  | 180                     | 18                         | 1.2                        |
| 48                         | 67                   | 720                     | 36                         | 2.4                        |

## CHARACTERISTICS

|                                         |                           |                                                                                                            |
|-----------------------------------------|---------------------------|------------------------------------------------------------------------------------------------------------|
| Operate voltage                         |                           | 75% of nominal voltage or less                                                                             |
| Release voltage                         |                           | 5% of nominal voltage or more                                                                              |
| Operate time (At nominal voltage)       |                           | 30ms max.                                                                                                  |
| Release time(At nominal voltage)        |                           | 30ms max.                                                                                                  |
| Insulation resistance                   |                           | 1,000MΩ min. (at 500 VDC)                                                                                  |
| Dielectric strength                     | Between coil and contacts | 4,000 VAC, 50/60Hz (1min)                                                                                  |
|                                         | Between open contacts     | 1,300 VAC, 50/60Hz (1min)                                                                                  |
| Surge voltage between coil and contacts |                           | 6,000V(1.2/50μs)                                                                                           |
| Vibration resistance                    | Destruction               | 10 to 55 Hz,1.5mm double amplitude                                                                         |
|                                         | Malfunction               | 10 to 55 Hz,1.5mm double amplitude                                                                         |
| Shock resistance                        | Destruction               | 1,000 m/s2(100G approximately )                                                                            |
|                                         | Malfunction               | 100 m/s2(10G approximately)                                                                                |
| Ambient temperature                     |                           | Operating: -40~+85°C<br>Operating: -40~+65°C ( Only for CHDR-150H type)<br>(without icing or condensation) |
| Ambient humidity                        |                           | Operating: 20% to 85% RH                                                                                   |
| Terminal                                |                           | PCB terminals                                                                                              |
| Enclosure (94V-0 Flammability Ratings)  |                           | V: Vented(Flux-tight),plastic cover.(RT II)                                                                |
| Weight                                  |                           | Approx. 165g                                                                                               |

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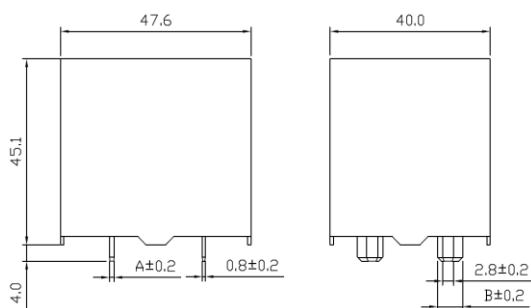
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## ORDERING INFORMATION

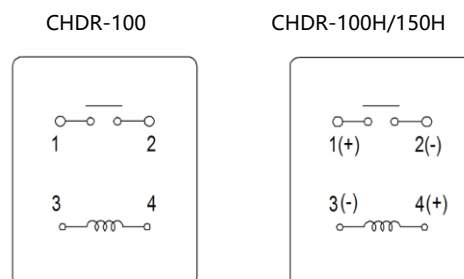
|                                                                                                                                                                      |    |    |      |   |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|------|---|-----|
| CHDR                                                                                                                                                                 | -1 | 12 | D100 | H | 000 |
| 1. Product Family<br>CHDR Series                                                                                                                                     |    |    |      |   |     |
| 2. Number of Poles<br>1=1 pole                                                                                                                                       |    |    |      |   |     |
| 3. Rated Coil Voltage<br>12 =12VDC, 24 =24VDC, 48 =48VDC                                                                                                             |    |    |      |   |     |
| 4. Current Rating<br>D100=100A D150=150A                                                                                                                             |    |    |      |   |     |
| 5. Load voltage type<br>H=60VDC(100A&150A) Blank=48VDC (100A)                                                                                                        |    |    |      |   |     |
| 6. Additional numbers and /or letters<br>000-999, AAA-ZZZ, aaa-zzz or blank, which does not represent electrical changes,<br>only for specific customer requirements |    |    |      |   |     |

## OUTLINE DIMENSION

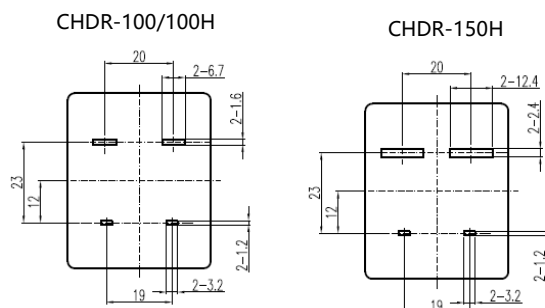


| Model         | A Terminal | B Terminal |
|---------------|------------|------------|
| CHDR-100/100H | 1.2        | 6.3        |
| CHDR-150H     | 2.0        | 12.0       |

## WIRING DIAGRAMS (BOTTOM VIEWS)



## PC BOARD LAYOUTS (BOTTOM VIEWS)



Remark: 1) The reference tolerance in outline dimension:

outline dimension  $\leq 1\text{mm}$ , reference tolerance is  $\pm 0.2\text{mm}$ ;

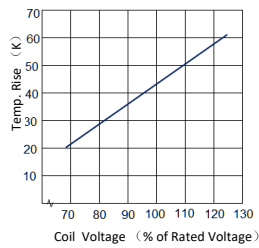
outline dimension  $> 1\text{mm}$  and  $\leq 5\text{mm}$ , reference tolerance is  $\pm 0.3\text{mm}$ ;

outline dimension  $> 5\text{mm}$ , reference tolerance is  $\pm 0.5\text{mm}$ .

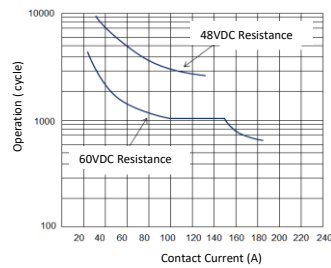


## Reference Date

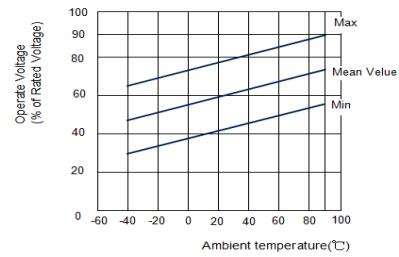
Coil Temperature Rise



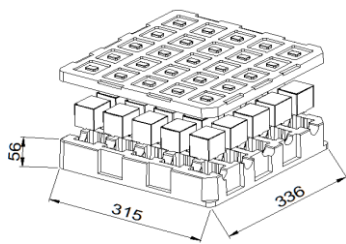
Electrical Endurance



Coil Operate Voltage & Temperature Cure



## PACKAGING



25 pcs inside a box

50 pcs inside a carton

Disclaimer:

The specification is for reference only, if you need more detail information, please contact Churod. We could not evaluate all the performance and all parameters for every possible application.

And the user should be in a right position to choose the suitable product for their own application. If there is any new need, please contact Churod for the technical service.

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